

REMARKS

In the office action dated September 9, 2005 (now the fifth non-final action), the Examiner maintained her rejection of all claims, but presented a new basis for rejection, namely, that claims 1-15 are unpatentable under Section 103(a) over the combination of (1) applicant's admitted prior art ("AAPA") and U.S. Patent No. 6,268,840 ("Huang"), or alternatively, (2) AAPA and U.S. Patent No. 5,541,619 ("Hayahsi"). Applicant respectfully traverses the rejection.

1. The Claims Are Patentable Over AAPA In View Of Huang

Applicant submits that it would not be obvious to combine the teaching of a unipolar drive waveform for a display using nematic liquid crystal material, as disclosed in Huang, with applicant's admitted prior art, namely a segmented pi-cell modulator driven by an alternating polarity waveform. The differences in performance and operation of nematic LC's and surface mode LC's (pi-cells) have critical significance such that techniques applicable to one type of LC often have no relevant corollary to another type of LC.

Much like the Examiner's previous reliance on the Matsuda patent, Huang does not teach or suggest a modulator, much less a segmented modulator, nor the use of pi-cell liquid crystal material for the modulator. To the contrary, Huang discloses a drive method for a display that uses nematic liquid crystal material. As indicated in our previous response, the physical and optical properties of nematic cells are significantly different than those of surface mode or pi-cells. As described in the background of applicant's disclosure, the operation of a nematic LC device is due to optical activity when light traverses the bulk of the LC material. A pi-cell, however, operates due to a phase shift created by retardation at or near the surface layer. This phase shift allows the pi-cell to modulate light rather than deflect it. Thus, the problems and solutions associated with one type of LC material are not necessarily common or even relevant to the problems and solutions associated with another type of LC material.

Huang is clearly limited to nematic LC's. For example, in the FIELD OF THE INVENTION, Huang says that "[t]he present invention concerns a visual display utilizing a chiral nematic," (col. 1:17-18) and in the DETAILED DESCRIPTION, that "[t]he display 10 is constructed using a reflective bistable chiral nematic liquid crystal material." (col. 4:27-28). Further, nematic LC's are known to switch states faster than pi-cells., and thus, the drive

problems associated with nematic LC's are not the same as drive issues associated with surface mode LC's (pi-cells).

Thus, applicant submits that there is no teaching or suggestion, nor is there any motivation, in either cited reference, to modify the AAPA to incorporate a technique applicable only to nematic LC's. For that reason, applicant believes claims 1-15 as pending are patentable over the cited combination.

2. The Claims Are Patentable Over AAPA In View Of Hayashi

Like Huang, Hayashi is a typical liquid crystal display using nematic LC material. Further, Hayashi is completely unconcerned with acting as a modulator – it deals with a display. Thus, for all the same reasons, applicant submits that claims 1-15 as pending are patentable over the cited combination. There is no teaching, suggestion, or motivation, to incorporate a drive waveform for a nematic LC display into a pi-cell modulator.

3. Conclusion

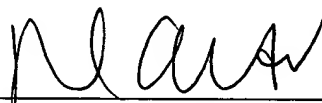
For all the foregoing reasons, applicant submits that the claims as pending are patentable over the cited combinations, and reconsideration is requested.

Respectfully submitted,

Dated: _____

12/9/05

By: _____



Richard A. Nebb
Reg. No. 33,540

JEFFER, MANGELS, BUTLER & MARMARO LLP
1900 Avenue of the Stars, 7th Floor
Los Angeles, California 90067-4308
tel: (415) 398-3800
fax: (415) 398-5584
rnebb@jmbm.com